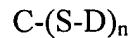


**WE CLAIM:**

1. A charge transporting or light emitting polymerizable material, comprising: a reactive non-mesogenic compound of the following formula:



wherein:

C is a chromophore;

S is a spacer;

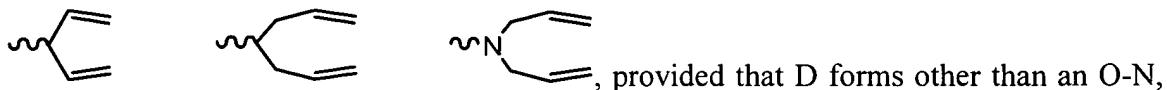
D is a non-conjugated diene susceptible to photopolymerization; and,

n is selected from 1-10.

2. The polymerizable material of claim 1, wherein chromophore C is selected from: aryl substituted fluorene; 4,4',4''-tris[N-(1-naphthyl)-N-phenyl-amino]triphenylamine; and, bis-triphenylamine, wherein from 0-2 hydrogen atoms on chromophore C are replaced by a group selected from deuterium, F, and CH<sub>3</sub>.

3. The polymerizable material of claim 1, wherein:  
spacer S is selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;  
from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,  
from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

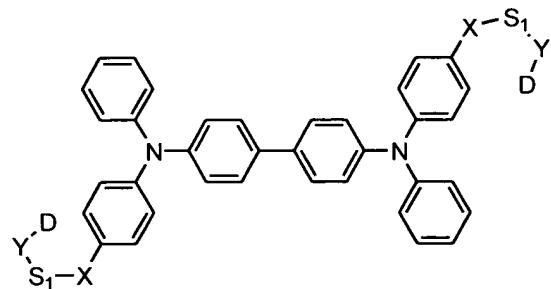
4. The polymerizable material of claim 1, wherein diene D is selected from:



S-N, or N-N bond with spacer S.

5. The polymerizable material of claim 1, wherein n is selected from 2, 3, 4, 5, and 6.

6. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



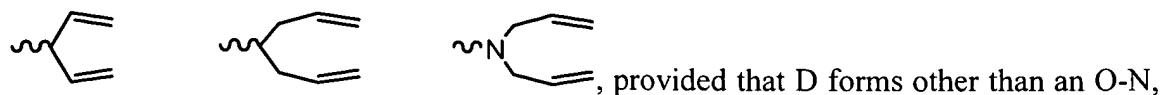
wherein:

each X is independently selected from CH<sub>2</sub>O, CH<sub>2</sub>, and CH<sub>2</sub>NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

each S<sub>1</sub> is independently selected from a C<sub>2-11</sub> alkylene group and a C<sub>2-11</sub> alkenylene group;

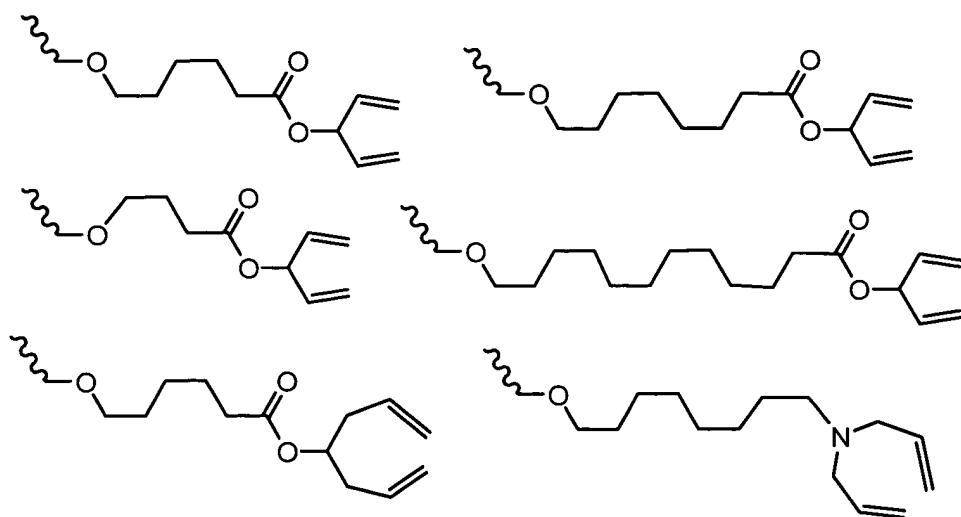
each Y is independently selected from CH<sub>2</sub>, O, CO<sub>2</sub>, and S; and,

each D is independently selected from:

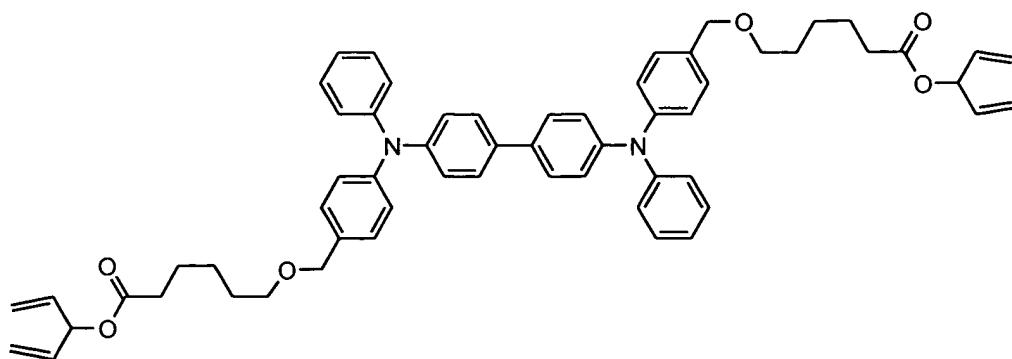


S-N, or N-N bond with spacer S.

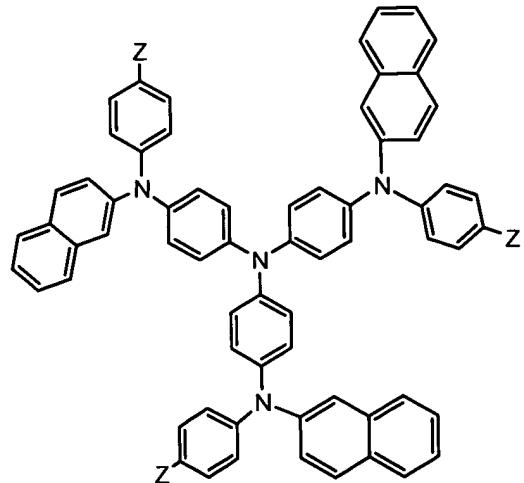
7. The polymerizable material of claim 6, wherein X-S<sub>1</sub>-Y-D is selected from:



8. The polymerizable material of claim 6, wherein the reactive non-mesogenic compound is:



9. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



wherein:

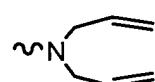
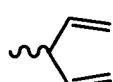
each Z is independently selected from X-S<sub>1</sub>-Y-D and H, provided that only one Z is H;

each X is independently selected from CH<sub>2</sub>O, CH<sub>2</sub>, and CH<sub>2</sub>NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

each S<sub>1</sub> is independently selected from a C<sub>2-11</sub> alkylene group and a C<sub>2-11</sub> alkenylene group;

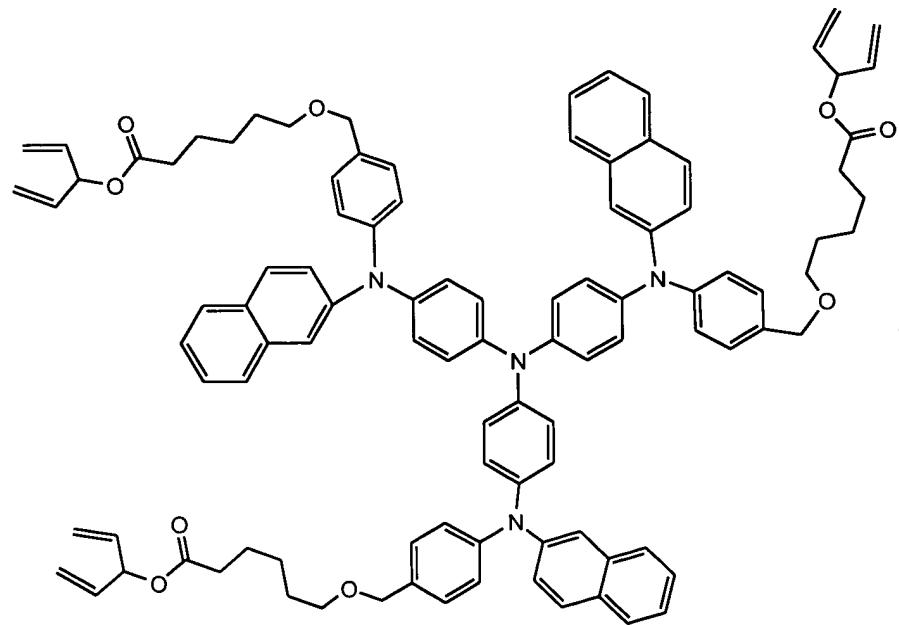
each Y is independently selected from CH<sub>2</sub>, O, CO<sub>2</sub>, and S; and,

each D is independently selected from:

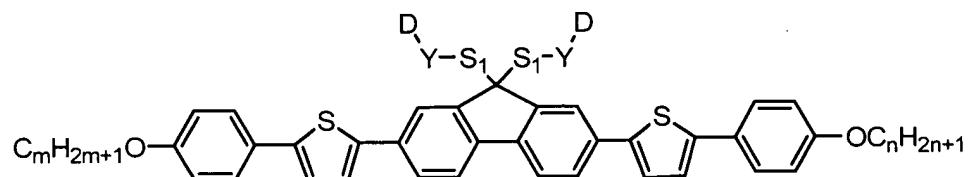


, provided that D forms other than an O-N, S-N, or N-N bond with spacer S.

10. The polymerizable material of claim 9, wherein the reactive non-mesogenic compound is:

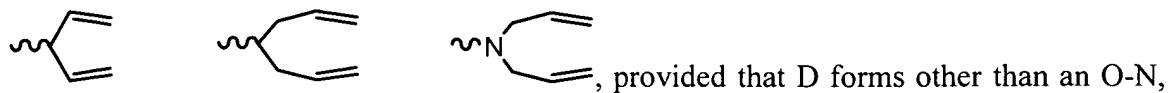


11. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



wherein:

- each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;
- each  $Y$  is independently selected from  $CH_2$ ,  $O$ ,  $CO_2$ , and  $S$ ;
- each  $D$  is independently selected from:



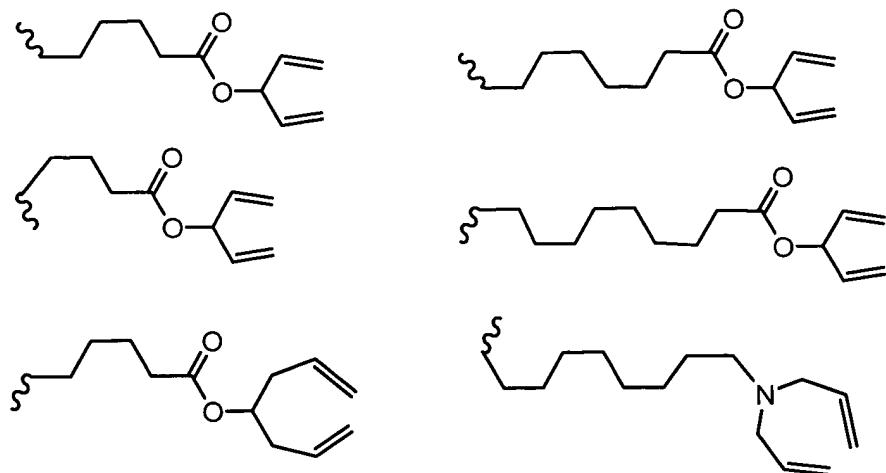
, provided that D forms other than an O-N,

S-N, or N-N bond with spacer S;

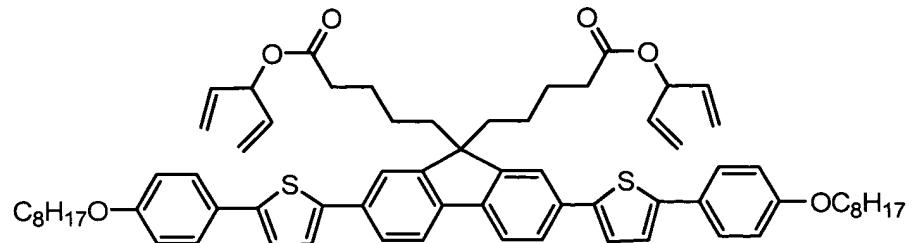
m is selected from 3-11; and,

n is selected from 3-11.

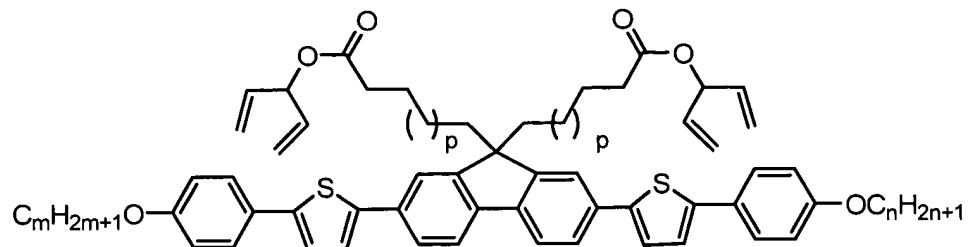
12. The polymerizable material of claim 11, wherein the  $S_1$ -Y-D group is selected from:



13. The polymerizable material of claim 11, wherein the reactive non-mesogenic compound is:



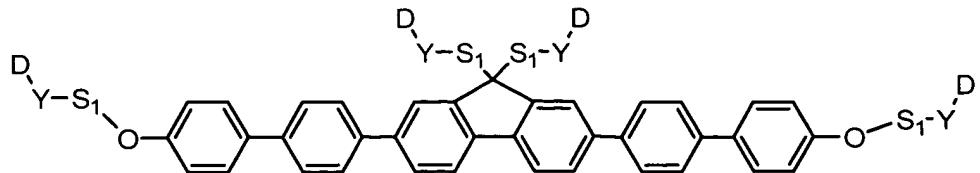
14. The polymerizable material of claim 11, wherein the reactive non-mesogenic compound has the formula:



wherein n, m, and p are defined as follows:

p	m	n
2	8	8
4	8	8
8	8	8
1	3	3
1	4	4
1	5	5
1	6	6.

15. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:

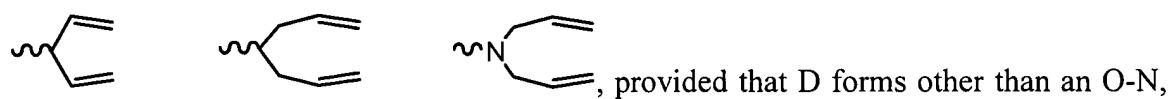


wherein:

each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;

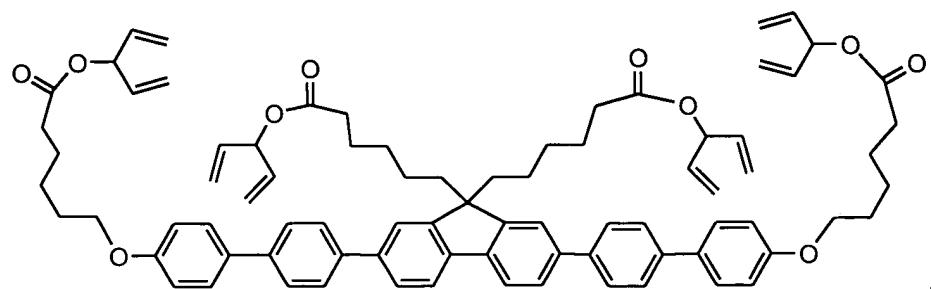
each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S; and,

each D is independently selected from:

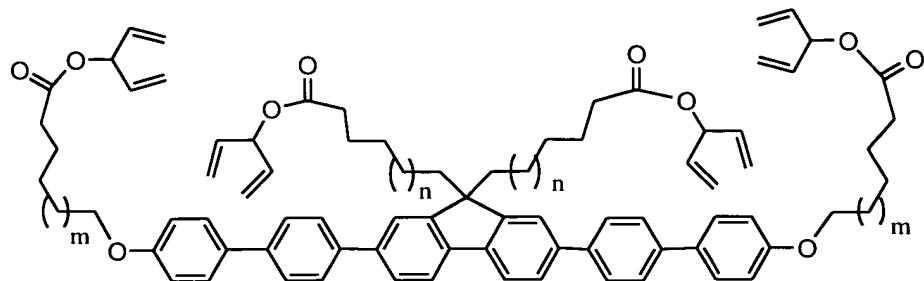


, provided that D forms other than an O-N, S-N, or N-N bond with spacer S.

16. The polymerizable material of claim 15, wherein the reactive non-mesogenic compound is:



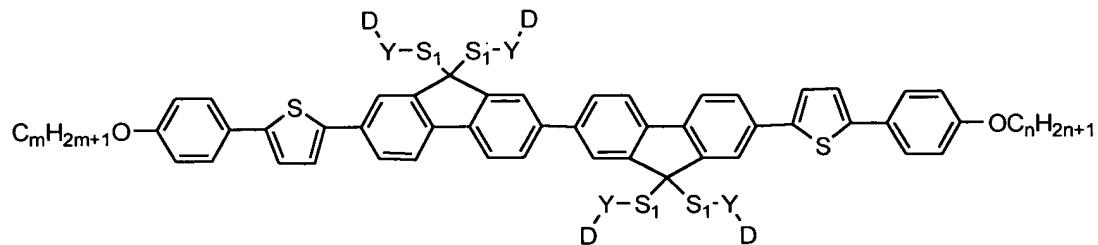
17. The polymerizable material of claim 15, wherein the reactive non-mesogenic compound has the formula:



wherein n and m are defined as follows:

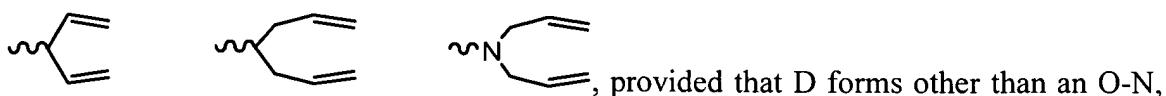
n	m
1	3
1	7
3	1
3	3
3	7
7	1
7	3
7	7

18. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



wherein:

- each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;
- each Y is independently selected from  $CH_2$ ,  $O$ ,  $CO_2$ , and  $S$ ; preferably  $CO_2$ ; and,
- each D is independently selected from:

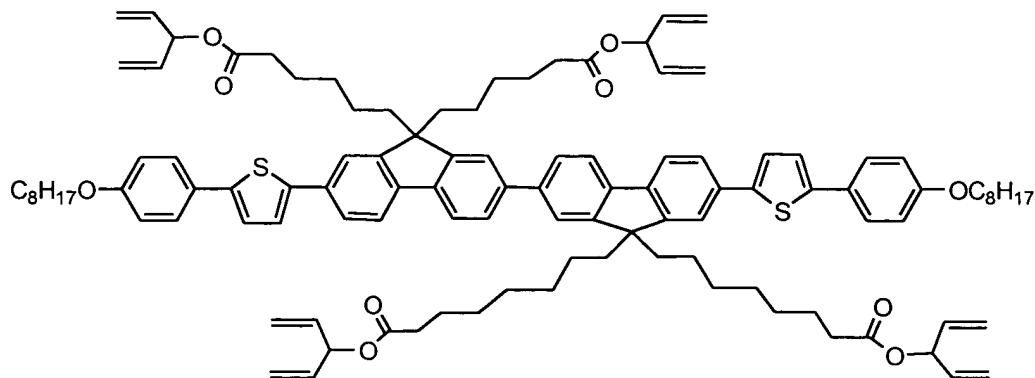


S-N, or N-N bond with spacer S;

m is selected from 3,4,5,6,7, 8, 9, 10, and 11; and,

n is selected from 3,4,5,6,7, 8, 9, 10, and 11.

19. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



20. A light emitting polymerizable material, comprising: a reactive discotic compound having the following formula:



wherein:

C is a chromophore capable of forming a discotic liquid crystal;

S is a spacer;

$D_1$  is H or is a non-conjugated diene susceptible to photopolymerization, provided that at least 2  $D_1$  are other than H; and,

n is selected from 2-20.

21. The polymerizable material of claim 20, wherein chromophore C is a phthalocyanine.

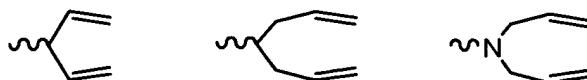
22. The polymerizable material of claim 20, wherein chromophore C is a phthalocyanine bound to a metal.

23. The polymerizable material of claim 20, wherein chromophore C is a porphyrin.

24. The polymerizable material of claim 20, wherein chromophore C is a porphyrin bound to a metal.

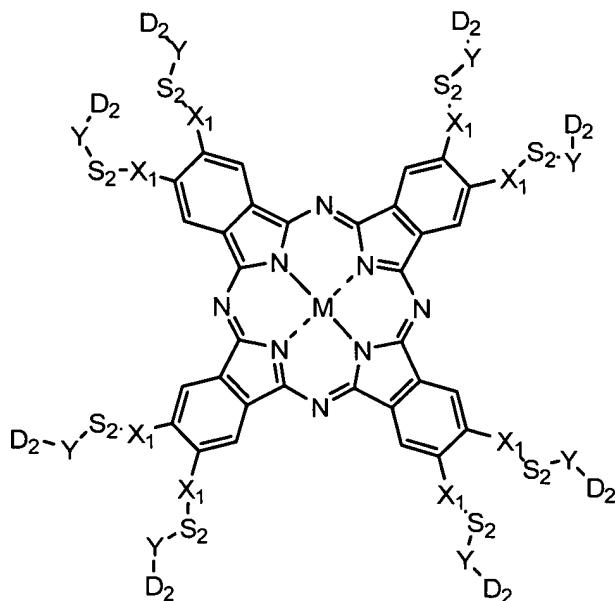
25. The polymerizable material of claim 20, wherein:  
spacer S is selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;  
from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,  
from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

26. The polymerizable material of claim 20, wherein diene D<sub>1</sub> is H or selected

from:  , provided that D<sub>1</sub> forms other than an O-N, S-N, or N-N bond with spacer S, and further provided that at least 2 D<sub>1</sub> are other than H.

27. The polymerizable material of claim 20, wherein n is selected from 4-8.

28. The polymerizable material of claim 20, wherein the reactive discotic compound has the formula:



wherein:

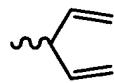
M is a metal;

X<sub>1</sub> is selected from O, CH<sub>2</sub>, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

each  $S_2$  is independently selected from a  $C_{2-12}$  alkylene group and a  $C_{2-12}$  alkenylene group;

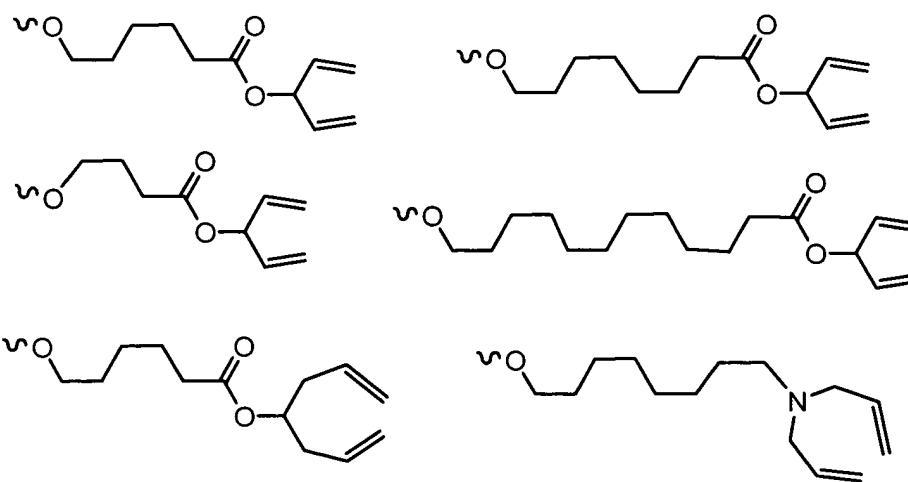
each  $Y$  is independently selected from  $CH_2$ ,  $O$ ,  $CO_2$ , and  $S$ ; and,

each  $D_2$  is independently  $C_{1-6}$  alkyl or is selected from:

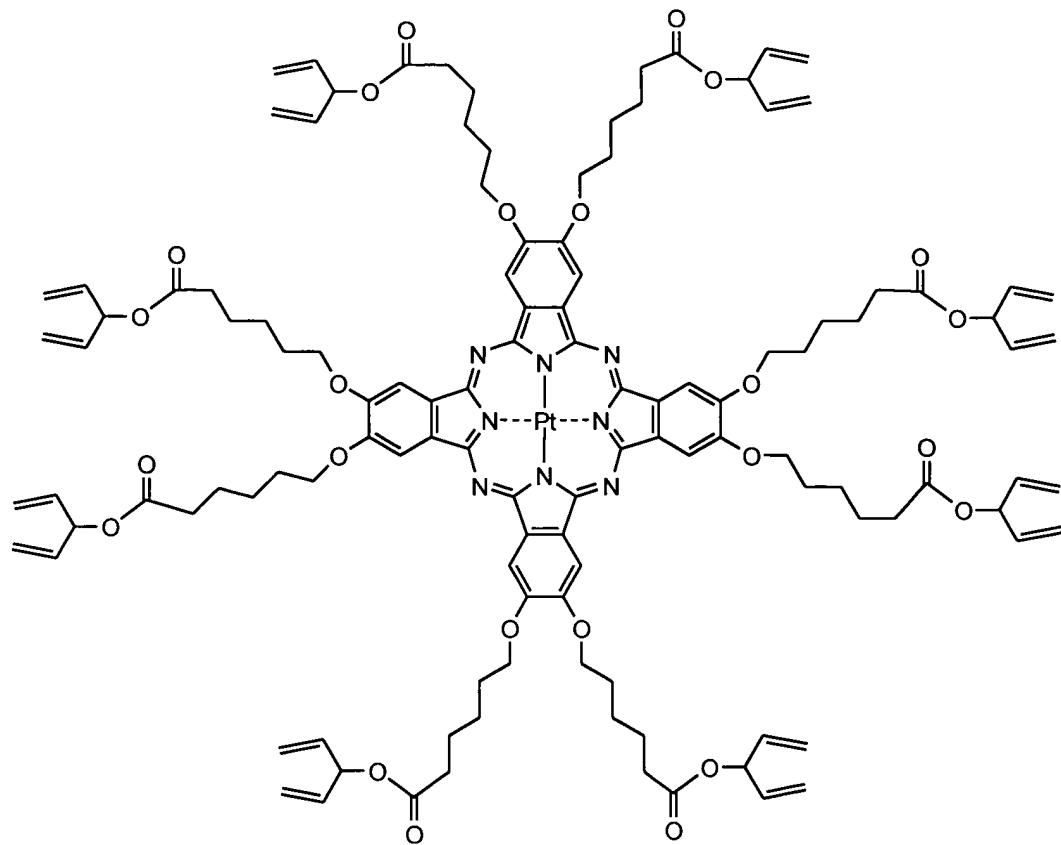


, provided that  $D_2$  forms other than an  $O-N$ ,  $S-N$ , or  $N-N$  bond with spacer  $S$ , and further provided that at least two  $D_1$  are other than alkyl.

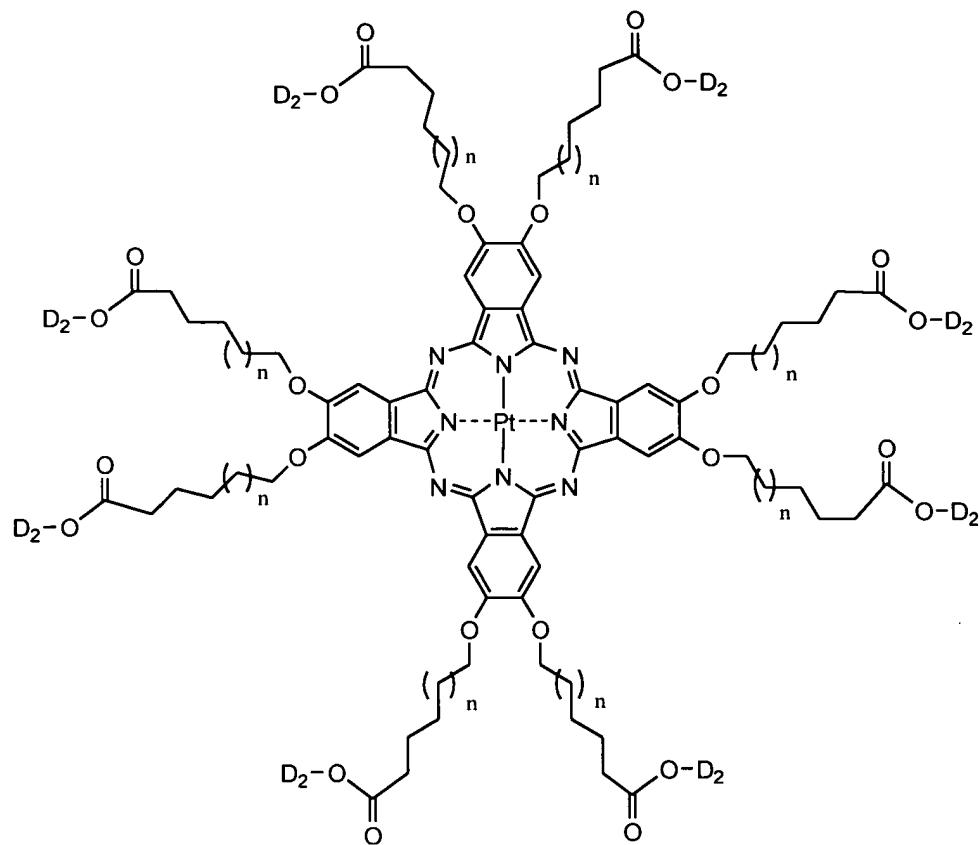
29. The polymerizable material of claim 28, wherein  $X_1-S_2-Y-D_2$  is selected from:



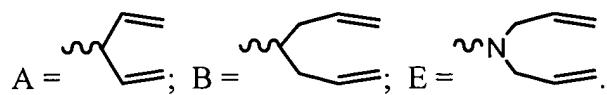
30. The polymerizable material of claim 28, wherein the reactive discotic compound is:



31. The polymerizable material of claim 28, wherein the reactive discotic compound has the formula:



n	D <sub>2</sub>
1	B
1	E
2	A
2	B
2	E
3	A
3	B
3	E



32. A light emitting polymerizable material, comprising: a reactive oligomeric or polymeric compound of the formula:

-[Ar<sup>1</sup>-(S-D)<sub>q</sub>]<sub>n</sub>-[Ar<sup>2</sup>-(S-D)<sub>p</sub>]<sub>m</sub>-

wherein:

Ar<sup>1</sup> is a first aromatic group;

Ar<sup>2</sup> is a second aromatic group;

each S is independently a spacer;

each D is independently a non-conjugated diene susceptible to photopolymerization;

p is selected from 0-10;

q is selected from 0-10;

n is a mole fraction of [Ar<sup>1</sup>-(S-D)<sub>q</sub>] in the oligomeric or polymeric backbone of 0-90%;

m is a mole fraction of [Ar<sup>2</sup>-(S-D)<sub>p</sub>] in the oligomeric or polymeric backbone of 100-n%; and,

there are 2-200 repeat units in the oligomeric or polymeric backbone;

provided that p+q total at least 1; and,

further provided that when n is 0 then p is other than 0.

33. The polymerizable material of claim 32, wherein Ar<sup>1</sup> and Ar<sup>2</sup> are selected from fluoren-diyl and bithien-diyl

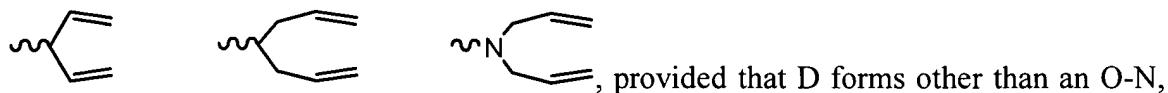
34. The polymerizable material of claim 32, wherein:

spacer S is selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;

from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,

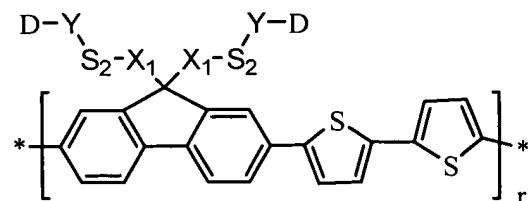
from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

35. The polymerizable material of claim 32, wherein diene D is selected from:



S-N, or N-N bond with spacer S.

36. The polymerizable material of claim 32, wherein the reactive oligomeric or polymeric compound has the formula:



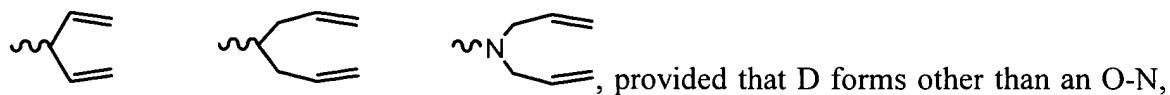
wherein:

X<sub>1</sub> is selected from O, CH<sub>2</sub>, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

each S<sub>2</sub> is independently selected from a C<sub>2-12</sub> alkylene group and a C<sub>2-12</sub> alkenylene group;

each Y is independently selected from  $\text{CH}_2$ , O,  $\text{CO}_2$ , and S;

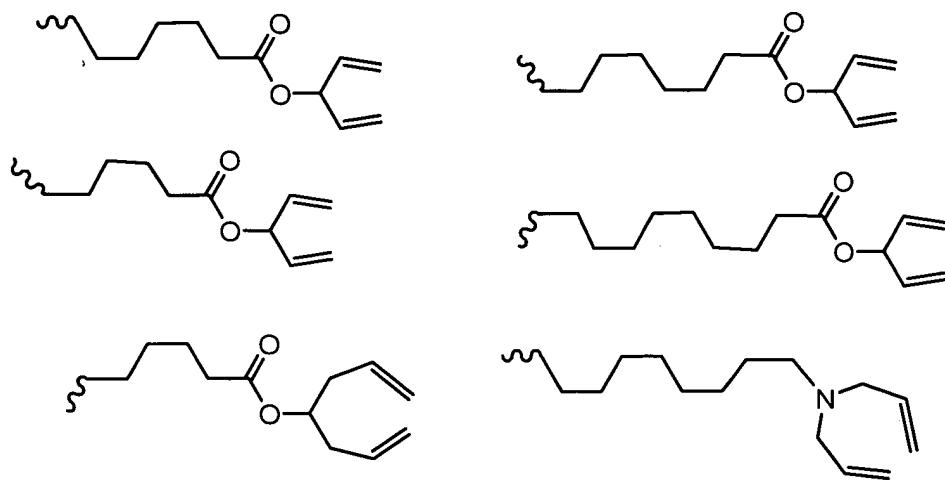
each D is independently selected from:



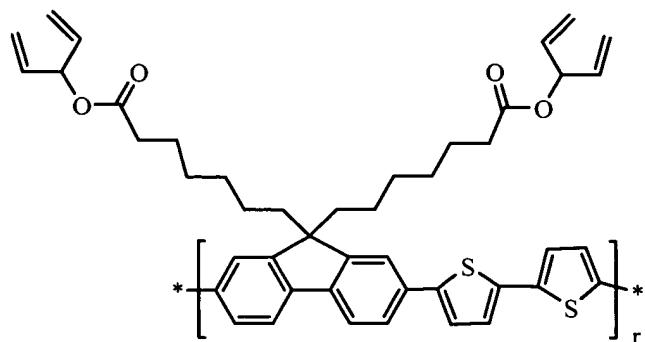
each \* is independently selected from H, OH,  $\text{C}_{1-12}$  alkyl,  $\text{C}_{1-12}$  alkoxy, and  $\text{X}_1\text{-S}_2\text{-Y-D}$ ; and,

r is selected from 2-100.

37. The polymerizable material of claim 36, wherein  $\text{X}_1\text{-S}_2\text{-Y-D}$  is selected from:

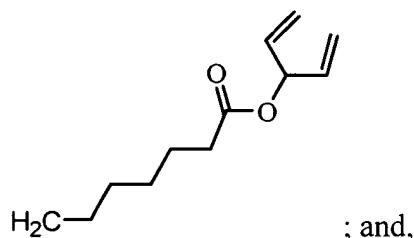


38. The polymerizable material of claim 36, wherein the compound has the formula:



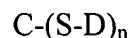
wherein:

each \* is independently selected from H, OH, C<sub>1-12</sub> alkyl, C<sub>1-12</sub> alkoxy, and



r is selected from 20-50.

39. A charge transporting or light emitting material, comprising: a polymer formed from a reactive non-mesogenic compound of the following formula:



wherein:

C is a chromophore;

S is a spacer;

D is a non-conjugated diene susceptible to photopolymerization; and,

n is selected from 1-10.

40. The material of claim 39, wherein chromophore C is selected from: aryl substituted fluorene; 4,4',4''-tris[N-(1-naphthyl)-N-phenyl-amino]triphenylamine; and, bis-triphenylamine, wherein from 0-2 hydrogen atoms on chromophore C are replaced by a group selected from deuterium, F, and CH<sub>3</sub>.

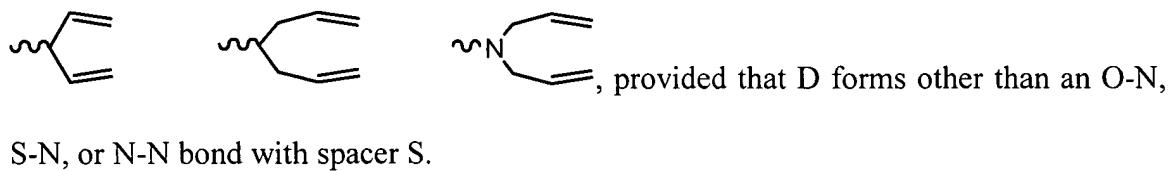
41. The material of claim 39, wherein:

spacer S is selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;

from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,

from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

42. The material of claim 39, wherein diene D is selected from:



43. The material of claim 39, wherein n is selected from 2, 3, 4, 5, and 6.

44. The material of claim 39, wherein the polymer is formed by photopolymerization.

45. The material of claim 39, wherein the polymer is substantially photoinitiator free.

46. The material of claim 39, wherein the polymer is an insoluble, cross-linked network.

47. The material of claim 39, wherein the polymer is electroluminescent.

48. The material of claim 39, wherein the polymer, further comprises: photoactive dyes.

49. The material of claim 39, wherein the polymer is pixellated.

50. The material of claim 39, wherein the polymer is pixellated into pixels of different colors.

51. The material of claim 50, wherein the different colors are red, green, and blue.

52. The material of claim 39, wherein the polymer is pixellated into pixels of different polarization directions.

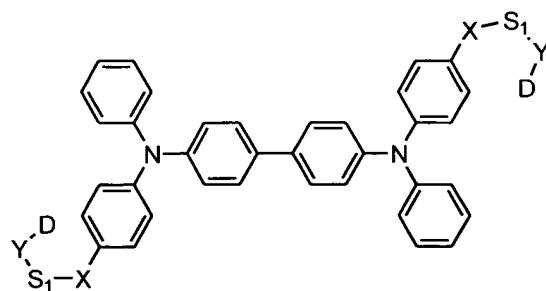
53. The material of claim 39, wherein the polymer is aligned.

54. The material of claim 39, wherein the polymer emits polarized light upon excitation.

55. The material of claim 54, wherein the polarized light is linear polarized light.

56. The material of claim 55, further comprising: a linear polarizer, wherein the linear polarizer has a polarization axis substantially aligned with a polarization of the linear polarized light.

57. The material of claim 39, wherein the reactive non-mesogenic compound has the formula:



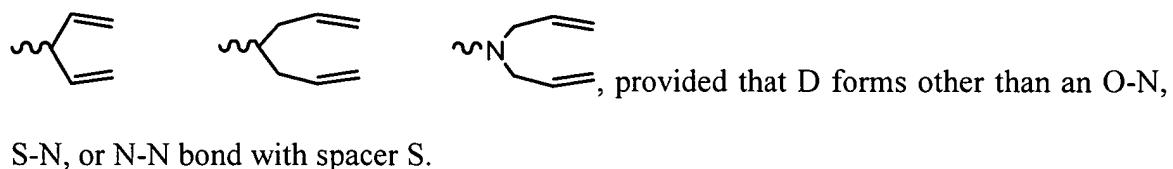
wherein:

each X is independently selected from CH<sub>2</sub>O, CH<sub>2</sub>, and CH<sub>2</sub>NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

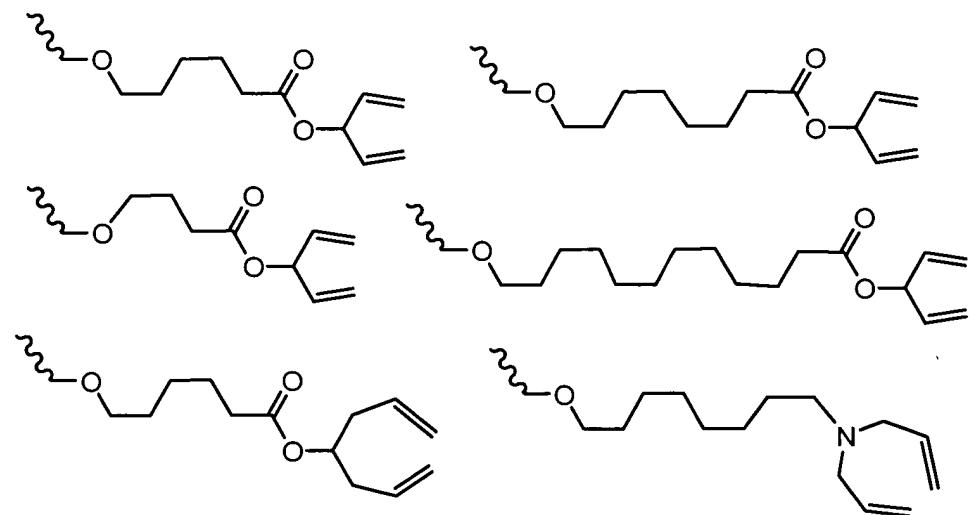
each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;

each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S; and,

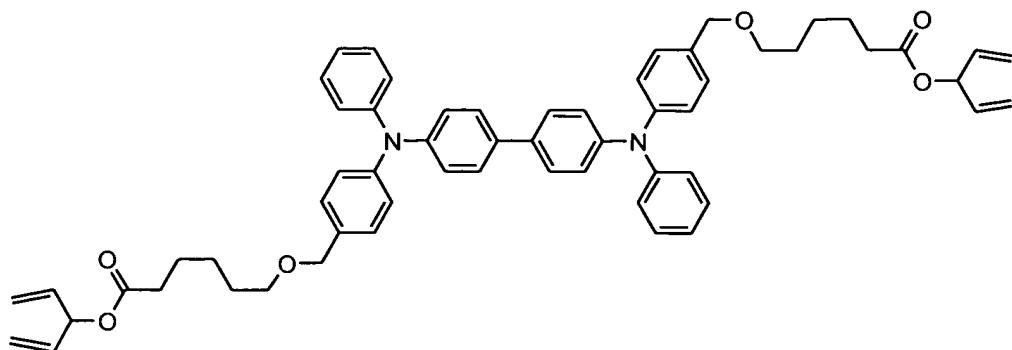
each D is independently selected from:



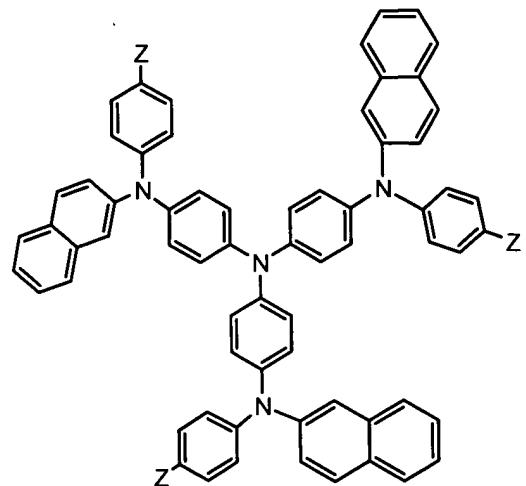
58. The material of claim 57, wherein  $X-S_1-Y-D$  is selected from:



59. The material of claim 57, wherein the reactive non-mesogenic compound is:



60. The material of claim 39, wherein the reactive non-mesogenic compound has the formula:



wherein:

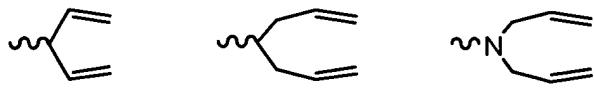
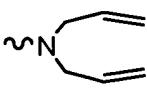
each Z is independently selected from X-S<sub>1</sub>-Y-D and H, provided that only one Z is H;

each X is independently selected from CH<sub>2</sub>O, CH<sub>2</sub>, and CH<sub>2</sub>NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;

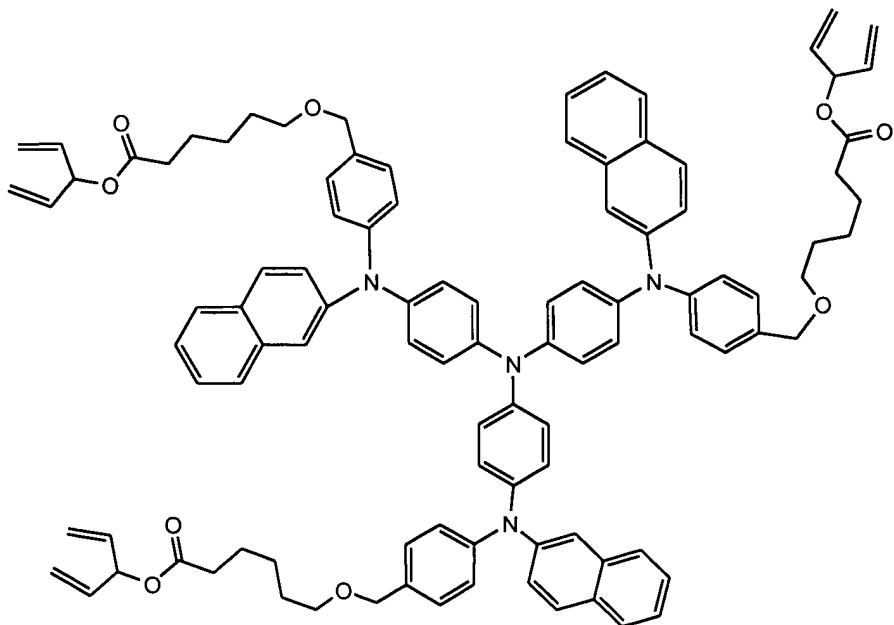
each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S; and,

each D is independently selected from:

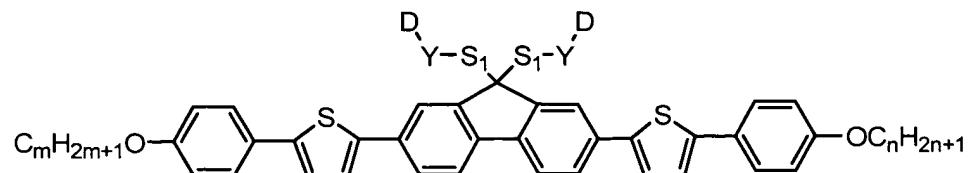
  $\sim N$  

, provided that D forms other than an O-N, S-N, or N-N bond with spacer S.

61. The material of claim 60, wherein the reactive non-mesogenic compound is:



62. The material of claim 39, wherein the reactive non-mesogenic compound has the formula:

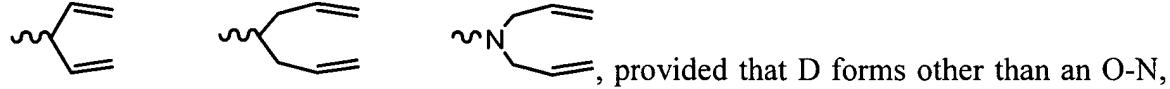


wherein:

each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;

each Y is independently selected from  $CH_2$ ,  $O$ ,  $CO_2$ , and  $S$ ;

each D is independently selected from:



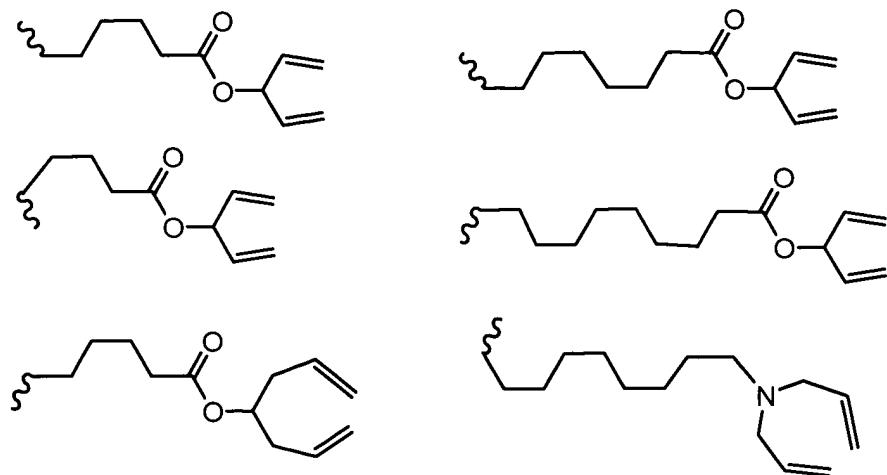
, provided that D forms other than an O-N,

S-N, or N-N bond with spacer S;

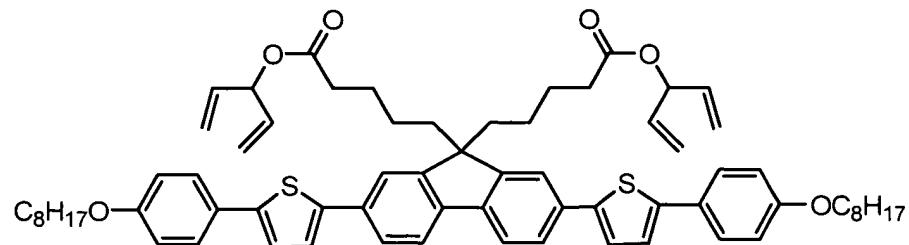
m is selected from 3-11; and,

n is selected from 3-11.

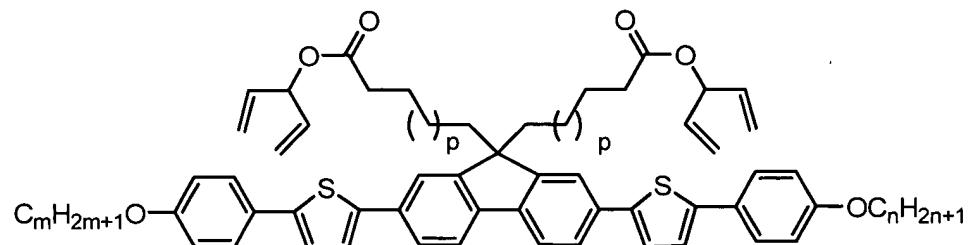
63. The material of claim 62, wherein the  $S_1$ -Y-D group is selected from:



64. The material of claim 62, wherein the reactive non-mesogenic compound is:



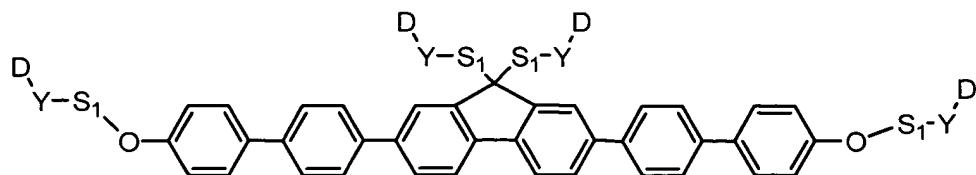
65. The material of claim 62, wherein the reactive non-mesogenic compound has the formula:



wherein n, m, and p are defined as follows:

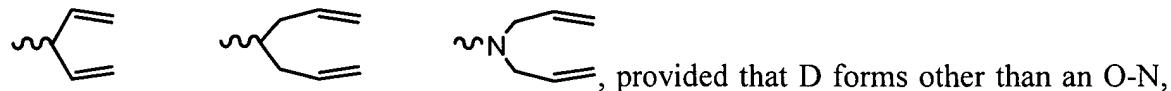
p	m	n
2	8	8
4	8	8
8	8	8
1	3	3
1	4	4
1	5	5
1	6	6.

66. The material of claim 39, wherein the reactive non-mesogenic compound has the formula:



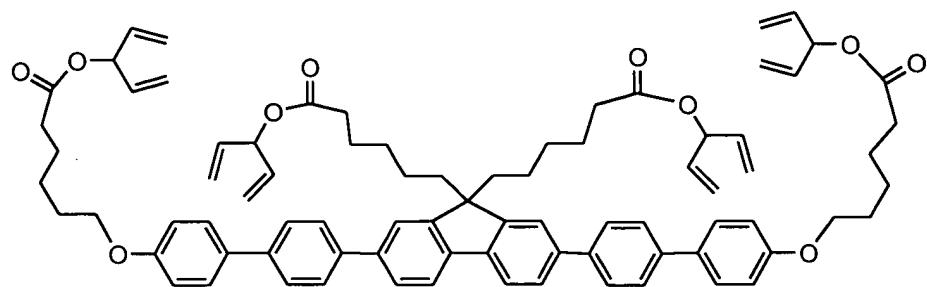
wherein:

- each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;
- each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S; and,
- each D is independently selected from:

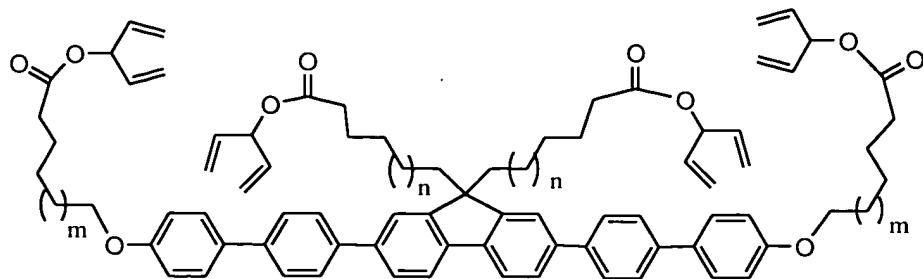


$S-N$ , or  $N-N$  bond with spacer  $S$ .

67. The material of claim 66, wherein the reactive non-mesogenic compound is:



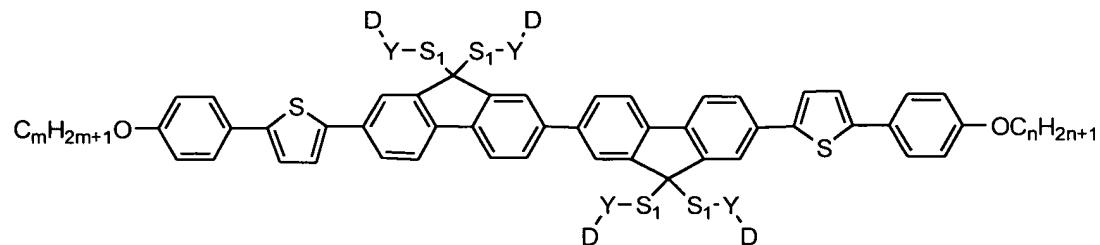
68. The material of claim 66, wherein the reactive non-mesogenic compound has the formula:



wherein n and m are defined as follows:

n	m
1	3
1	7
3	1
3	3
3	7
7	1
7	3
7	7

69. The material of claim 39, wherein the reactive non-mesogenic compound has the formula:

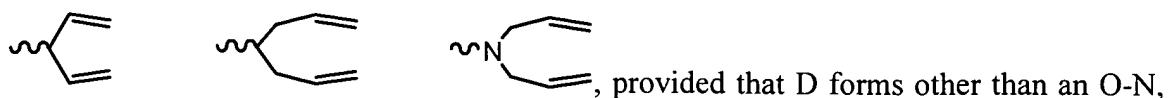


wherein:

each  $S_1$  is independently selected from a  $C_{2-11}$  alkylene group and a  $C_{2-11}$  alkenylene group;

each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S; preferably  $CO_2$ ; and,

each D is independently selected from:

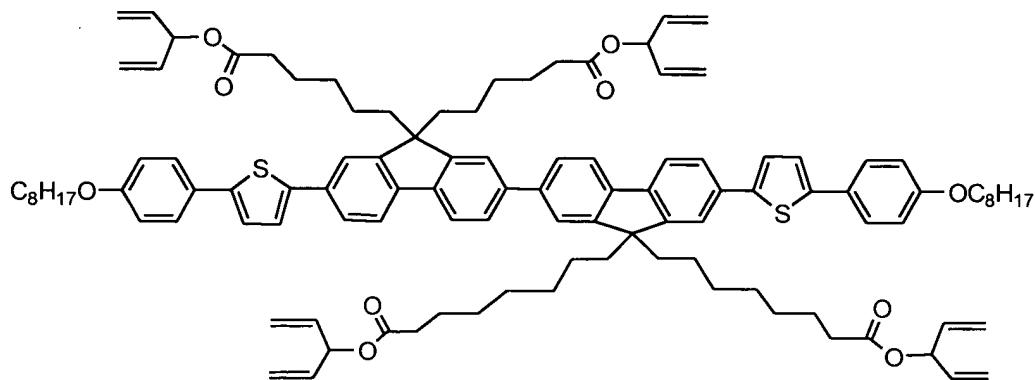


S-N, or N-N bond with spacer S;

m is selected from 3-11; and,

n is selected from 3-11.

70. The polymerizable material of claim 1, wherein the reactive non-mesogenic compound has the formula:



71. A light emitting material, comprising: a polymer formed from a reactive discotic compound having the following formula:



wherein:

C is a chromophore capable of forming a discotic liquid crystal;

S is a spacer;

D<sub>1</sub> is H or is a non-conjugated diene susceptible to photopolymerization, provided that at least 2 D<sub>1</sub> are other than H; and,

n is selected from 2-20.

72. The material of claim 71, wherein chromophore C is a phthalocyanine.

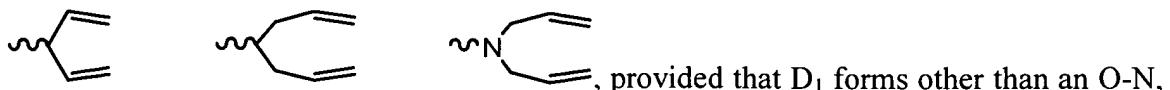
73. The material of claim 71, wherein chromophore C is a phthalocyanine bound to a metal.

74. The material of claim 71, wherein chromophore C is a porphyrin.

75. The material of claim 71, wherein chromophore C is a porphyrin bound to a metal.

76. The material of claim 71, wherein:  
spacer S is selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;  
from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,  
from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

77. The material of claim 71, wherein diene D<sub>1</sub> is H or selected from:



, provided that D<sub>1</sub> forms other than an O-N, S-N, or N-N bond with spacer S, and further provided that at least 2 D<sub>1</sub> are other than H.

78. The material of claim 71, wherein n is selected from 4-8.

79. The material of claim 71, wherein the polymer is formed by photopolymerization.

80. The material of claim 71, wherein the polymer is substantially photoinitiator free.

81. The material of claim 71, wherein the polymer is an insoluble, cross-linked network.

82. The material of claim 71, wherein the polymer is electroluminescent.

83. The material of claim 71, wherein the polymer, further comprises: photoactive dyes.

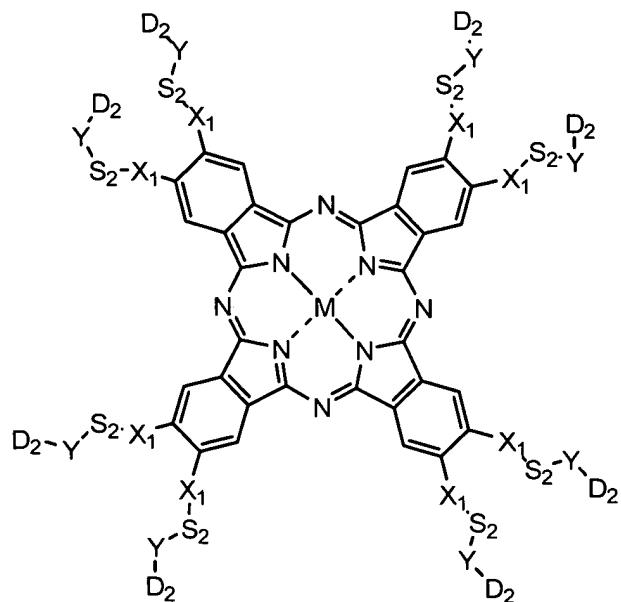
84. The material of claim 71, wherein the polymer is pixellated.

85. The material of claim 71, wherein the polymer is pixellated into pixels of different colors.

86. The material of claim 85, wherein the different colors are red, green, and blue.

87. The material of claim 71, wherein the polymer is pixellated into pixels of different polarization directions.

88. The material of claim 71, wherein the reactive discotic compound has the formula:



wherein:

M is a metal;

X<sub>1</sub> is selected from O, CH<sub>2</sub>, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>;

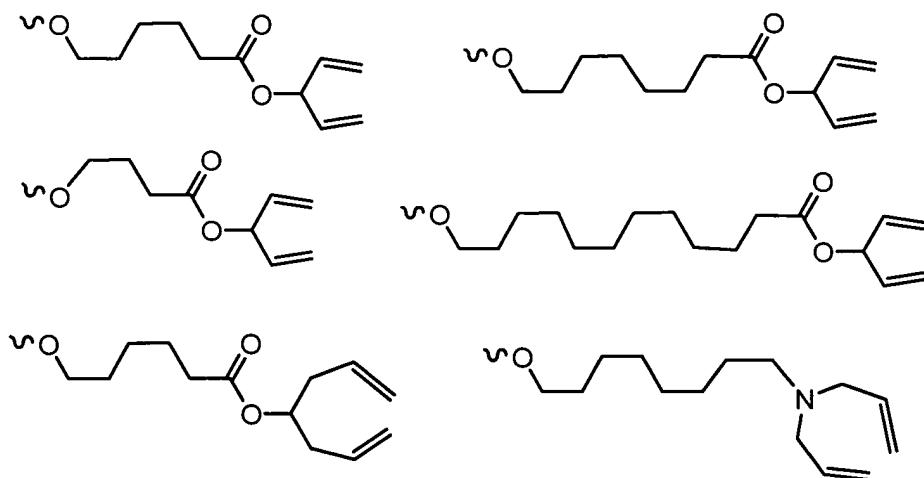
each S<sub>2</sub> is independently selected from a C<sub>2-12</sub> alkylene group and a C<sub>2-12</sub> alkenylene group;

each Y is independently selected from CH<sub>2</sub>, O, CO<sub>2</sub>, and S; and,

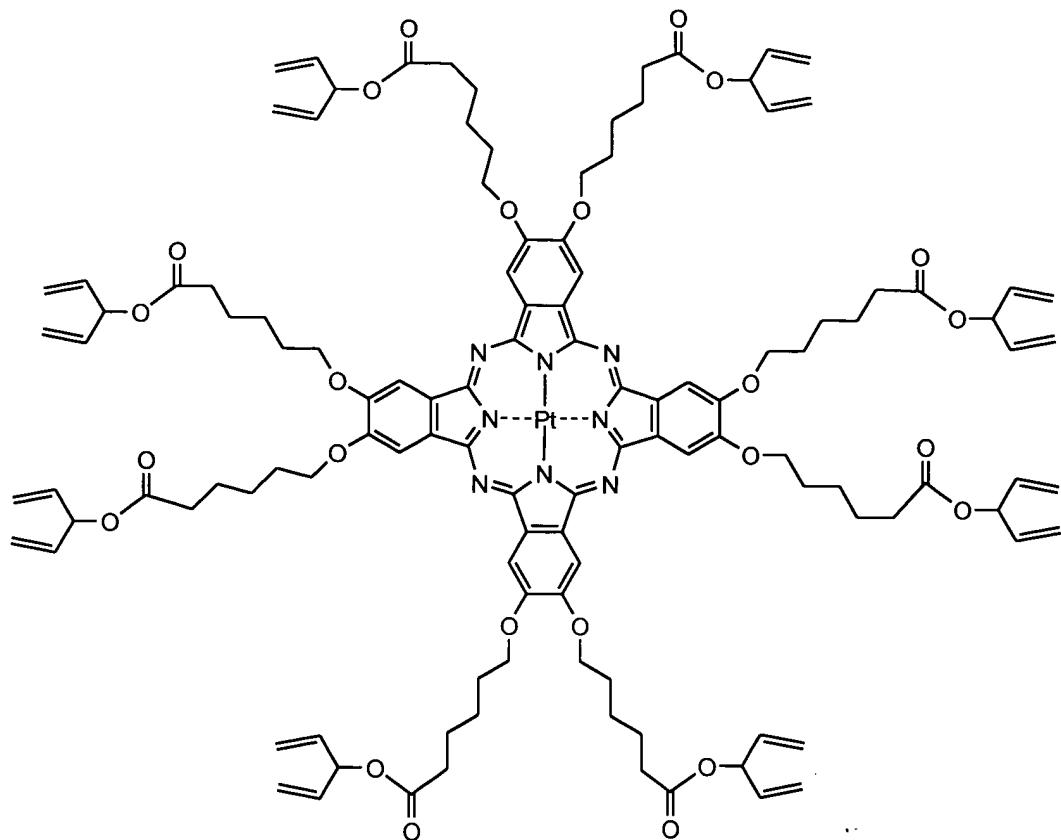
each D<sub>2</sub> is independently C<sub>1-6</sub> alkyl or is selected from:

, provided that D<sub>2</sub> forms other than an O-N, S-N, or N-N bond with spacer S, and further provided that at least two D<sub>1</sub> are other than alkyl.

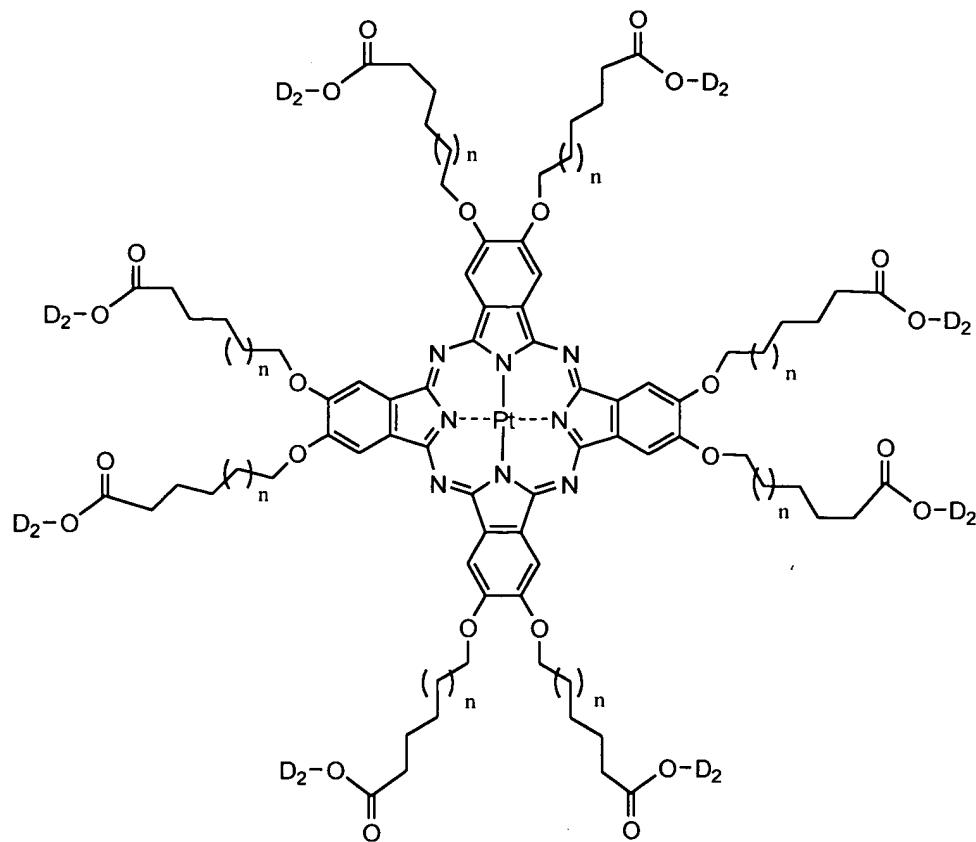
89. The material of claim 88, wherein X<sub>1</sub>-S<sub>2</sub>-Y-D<sub>2</sub> is selected from:



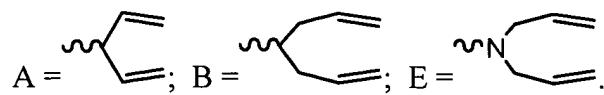
90. The material of claim 88, wherein the reactive discotic compound is:



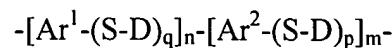
91. The material of claim 88, wherein the reactive discotic compound has the formula:



n	D <sub>2</sub>
1	B
1	E
2	A
2	B
2	E
3	A
3	B
3	E



92. A light emitting material, comprising: a polymer formed from a reactive oligomeric or polymeric compound of the formula:



wherein:

$Ar^1$  is a first aromatic group;

$Ar^2$  is a second aromatic group;

each  $S$  is independently a spacer;

each  $D$  is independently a non-conjugated diene susceptible to photopolymerization;

$p$  is selected from 0-10;

$q$  is selected from 0-10;

$n$  is a mole fraction of  $[Ar^1-(S-D)_q]$  in the oligomeric or polymeric backbone of 0-90%;

$m$  is a mole fraction of  $[Ar^2-(S-D)_p]$  in the oligomeric or polymeric backbone of 100- $n$ %; and,

there are 2-200 repeat units in the oligomeric or polymeric backbone;

provided that  $p+q$  total at least 1; and,

further provided that when  $n$  is 0 then  $p$  is other than 0.

93. The material of claim 92, wherein  $Ar^1$  and  $Ar^2$  are selected from fluorene-diyl and bithien-diyl.

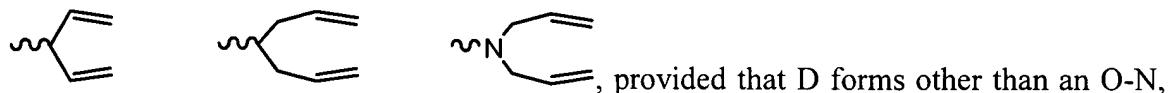
94. The material of claim 92, wherein:

each spacer S is independently selected from a C<sub>2-15</sub> alkylene group and a C<sub>2-15</sub> alkenylene group;

from 0-3 carbon atoms of spacer S are independently replaced by a heteroatom selected from O, S, and NR, wherein R is selected from H, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, n-C<sub>3</sub>H<sub>7</sub>, and i-C<sub>3</sub>H<sub>7</sub>; and,

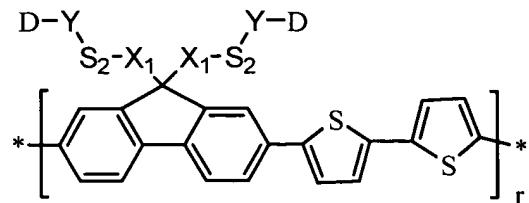
from 0-2 carbon atoms of spacer S are independently substituted by a carbonyl group.

95. The material of claim 92, wherein diene D is selected from:



S-N, or N-N bond with spacer S.

96. The material of claim 92, wherein the reactive oligomeric or polymeric compound has the formula:



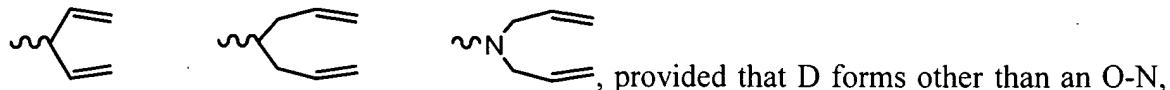
wherein:

each  $X_1$  is independently selected from O,  $\text{CH}_2$ , and NR, wherein R is selected from H,  $\text{CH}_3$ ,  $\text{C}_2\text{H}_5$ , n- $\text{C}_3\text{H}_7$ , and i- $\text{C}_3\text{H}_7$ ;

each  $S_2$  is independently selected from a  $C_{2-12}$  alkylene group and a  $C_{2-12}$  alkenylene group;

each Y is independently selected from  $CH_2$ , O,  $CO_2$ , and S;

each D is independently selected from:

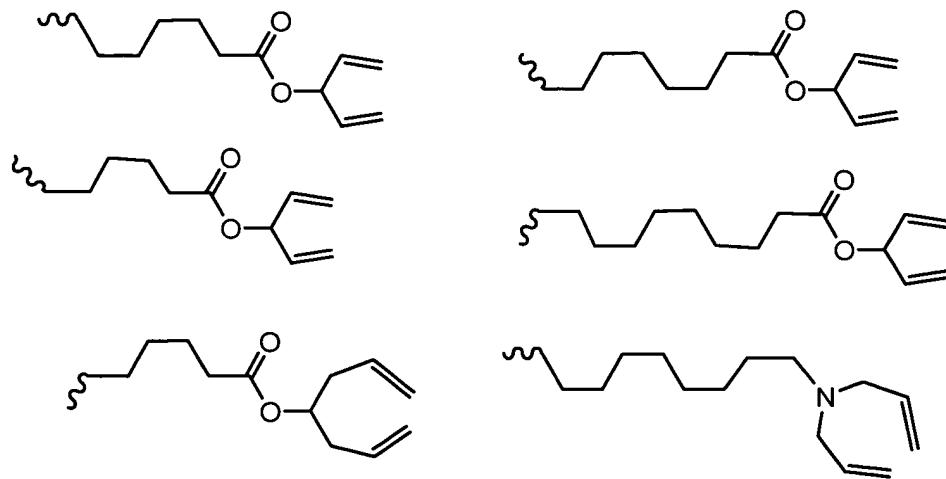


, provided that D forms other than an O-N, S-N, or N-N bond with spacer S;

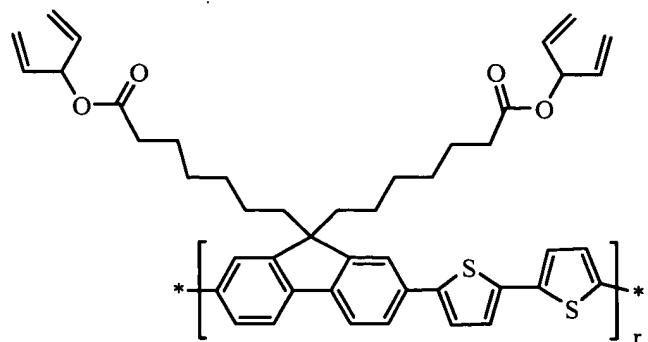
each \* is independently selected from H, OH,  $C_{1-12}$  alkyl,  $C_{1-12}$  alkoxy, and  $X_1-S_2-Y-D$ ; and,

r is selected from 2-100.

97. The material of claim 96, wherein  $X_1-S_2-Y-D$  is selected from:

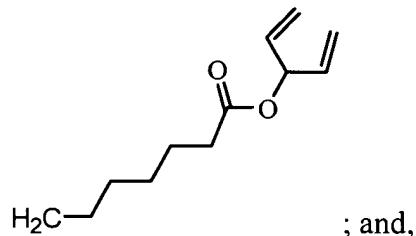


98. The material of claim 96, wherein the compound has the formula:



wherein:

each \* is independently selected from H, OH, C<sub>1-12</sub> alkyl, C<sub>1-12</sub> alkoxy, and



r is selected from 20-50.

99. The material of claim 92, wherein the polymer is formed by photopolymerization.

100. The material of claim 92, wherein the polymer is substantially photoinitiator free.

101. The material of claim 92, wherein the polymer is an insoluble, cross-linked network.

102. The material of claim 92, wherein the polymer is electroluminescent.

103. The material of claim 92, wherein the polymer, further comprises: photoactive dyes.

104. The material of claim 92, wherein the polymer is pixellated.

105. The material of claim 92, wherein the polymer is pixellated into pixels of different colors.

106. The material of claim 105, wherein the different colors are red, green, and blue.

107. The material of claim 92, wherein the polymer is pixellated into pixels of different polarization directions.

108. The material of claim 92, wherein the polymer is aligned.

109. The material of claim 92, wherein the polymer emits polarized light upon excitation.

110. The material of claim 109, wherein the polarized light is linear polarized light.

111. The material of claim 110, further comprising: a linear polarizer, wherein the linear polarizer has a polarization axis substantially aligned with a polarization of the linear polarized light.

112. A process for forming charge transporting or light emitting materials, comprising: photopolymerizing a reactive non-mesogenic compound of claim 1.

113. The process of claim 112, wherein the photopolymerizing substantially occurs without a photoinitiator.

114. A process for forming charge transporting or light emitting materials, comprising: photopolymerizing a reactive discotic compound of claim 20.

115. The process of claim 114, wherein the photopolymerizing substantially occurs without a photoinitiator.

116. A process for forming charge transporting or light emitting materials, comprising: photopolymerizing a reactive oligomeric or polymeric compound of claim 32.

117. The process of claim 116, wherein the photopolymerizing substantially occurs without a photoinitiator.

118. A device, comprising: a material layer according to Claim 39.

119. The device of claim 118, wherein the device is selected from: an electronic device, a light emitting device, an organic light emitting device, a lighting element, a photovoltaic cell, and a laser.

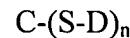
120. A device, comprising: a material layer according to Claim 71.

121. The device of claim 120, wherein the device is selected from: an electronic device, a light emitting device, an organic light emitting device, a lighting element, a photovoltaic cell, and a laser.

122. A device, comprising: a material layer according to claim 92.

123. The device of claim 122, wherein the device is selected from: an electronic device, a light emitting device, an organic light emitting device, a lighting element, a photovoltaic cell, and a laser.

124. The material of claim 39, wherein the polymer is a copolymer formed with at least a second reactive non-mesogenic compound of the following formula:



wherein:

C is a chromophore;

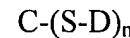
S is a spacer;

D is a non-conjugated diene susceptible to photopolymerization;

n is selected from 1-10; and,

provided that the second reactive non-mesogenic compound is different from the first reactive non-mesogenic compound.

125. The material of claim 124, wherein the copolymer is formed with a least a third reactive non-mesogenic compound of the following formula:



wherein:

C is a chromophore;

S is a spacer;

D is a non-conjugated diene susceptible to photopolymerization;

n is selected from 1-10; and,

provided that the third reactive non-mesogenic compound is different from the first and second reactive non-mesogenic compounds.

126. The material of claim 39, wherein the polymer is a copolymer formed with at least a first reactive mesogenic compound of the following formula:



wherein:

A is a chromophore;  
each S is independently a spacer; and,  
each B is independently an endgroup that is susceptible to photopolymerization.

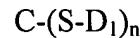
127. The material of claim 71, wherein the polymer is a copolymer formed from at least a second reactive discotic compound having the following formula:



wherein:

C is a chromophore capable of forming a discotic liquid crystal;  
S is a spacer;  
 $\text{D}_1$  is H or is a non-conjugated diene susceptible to photopolymerization, provided that at least 2  $\text{D}_1$  are other than H;  
n is selected from 2-20; and,  
provided that the second reactive discotic compound is different from the first reactive discotic compound.

128. The material of claim 127, wherein the polymer is a copolymer formed from at least a third reactive discotic compound having the following formula:



wherein:

C is a chromophore capable of forming a discotic liquid crystal;

S is a spacer;

D<sub>1</sub> is H or is a non-conjugated diene susceptible to photopolymerization, provided that at least 2 D<sub>1</sub> are other than H;

n is selected from 2-20; and,

provided that the third reactive discotic compound is different from the first and second reactive discotic compounds.

129. The material of claim 71, wherein the polymer is a copolymer formed with at least a first reactive mesogenic compound of the following formula:



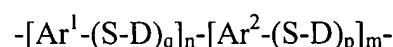
wherein:

A is a chromophore;

each S is independently a spacer; and,

each B is independently an endgroup that is susceptible to photopolymerization.

130. The material of claim 92, wherein the polymer is a copolymer formed from at least a second reactive oligomeric or polymeric compound of the formula:



wherein:

Ar<sup>1</sup> is a first aromatic group;

Ar<sup>2</sup> is a second aromatic group;

each S is independently a spacer;

each D is independently a non-conjugated diene susceptible to photopolymerization;

p is selected from 0-10;

q is selected from 0-10;

n is a mole fraction of [Ar<sup>1</sup>-(S-D)<sub>q</sub>] in the oligomeric or polymeric backbone of 0-90%;

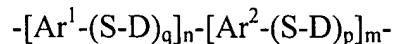
m is a mole fraction of [Ar<sup>2</sup>-(S-D)<sub>p</sub>] in the oligomeric or polymeric backbone of 100-n%; and,

there are 2-200 repeat units in the oligomeric or polymeric backbone;

provided that p+q total at least 1 and that when n is 0 then p is other than 0; and,

further provided that the second reactive oligomeric or polymeric compound is different from the first reactive oligomeric or polymeric compound.

131. The material of claim 130, wherein the polymer is a copolymer formed from at least a third reactive oligomeric or polymeric compound of the formula:



wherein:

Ar<sup>1</sup> is a first aromatic group;

Ar<sup>2</sup> is a second aromatic group;

each S is independently a spacer;

each D is independently a non-conjugated diene susceptible to photopolymerization;

p is selected from 0-10;

q is selected from 0-10;

n is a mole fraction of  $[Ar^1-(S-D)_q]$  in the oligomeric or polymeric backbone of 0-90%;

m is a mole fraction of  $[Ar^2-(S-D)_p]$  in the oligomeric or polymeric backbone of 100-n%; and,

there are 2-200 repeat units in the oligomeric or polymeric backbone; provided that p+q total at least 1 and that when n is 0 then p is other than 0; and, further provided that the third reactive oligomeric or polymeric compound is different from the first and second reactive oligomeric or polymeric compounds.

132. The material of claim 92, wherein the polymer is a copolymer formed with at least a first reactive mesogenic compound of the following formula:



wherein:

A is a chromophore;

each S is independently a spacer; and,

each B is independently an endgroup that is susceptible to photopolymerization.